REMARKS

Claims 1–20 are pending in the present application.

Claim 5 was amended solely to correct an error therein.

Reconsideration of the claims is respectfully requested.

1. **35 U.S.C. § 102 (Anticipation)**

Claims 1–2, 7–9 and 14–20 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 4,560,951 to *Fütterer*. This rejection is respectfully traversed.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. MPEP § 2131; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Independent claims 1, 8 and 15 each recite at least one inductance coupled to one or more inputs or outputs of a differential mode SAW resonator, connected and sized to approximately tune out a stray capacitance seen across the inputs or outputs within an equivalent circuit for the SAW resonator at a selected frequency. In the present invention, a differential mode SAW resonator is tuned by coupling to the reactive (inductive and capacitive) portion of the equivalent circuit for the SAW resonator with an external variable reactance in a manner forming a single resonant circuit,

in which changes to the variable reactance alter the resonant frequency of the combined resonant circuit. This allows greater tuning range to be achieved, and avoids secondary effects which must be suppressed. Access to the equivalent circuit is gained by negating or "tuning out" parasitic or stray capacitances across the port, which would otherwise prevent the external reactance from forming a single resonant circuit with the SAW resonator, but would instead form two resonant circuits.

Such a feature is not shown or suggested by the cited reference. *Fütterer* teaches first and second balancing inductances L4 and L5 across the inputs and the outputs, respectively, of a SAW device. However, *Fütterer* only teaches that such inductances are provided to offset the capacitive component of the impedance seen at the input and output for impedance-matching the SAW connections to the amplifier and the 3 dB coupler:

> The output terminal d of the 3dB coupler is connected to one input terminal of a surface-wave transmission line SAW which is intended for an oscillator frequency of 167 MHz. The other input terminal is connected to the reference potential; the first and second input terminals being connected through a resistance Z, with a value corresponding to the characteristics of the 3dB coupler or impedance of about 75 ohms, and through a first balancing inductance L4. Likewise, the two output terminals of the surface-wave transmission line are connected with one another through a second balancing inductance L5. The need for these balancing inductances arises from the strongly capacitive input and output impedances of the surface-wave transmission line. The output terminals of the surface-wave transmission line, at which the output signal is in push-pull, are connected with the base terminals of the first and second transistors T1, T2 of the amplifier V. Through the construction selected, both the amplifier and the 3dB coupler are match-terminated.

Fütterer, column 4, lines 48–67. However, the capacitive component of the impedance seen at the input and output ports of the SAW device in *Fütterer* will not be limited to the parasitic or stray capacitances, but will also be based in part on the reactance of the SAW device's equivalent circuit within the selected operating frequency range. Inductances L4 and L5 will not, as asserted in the Office Action, inherently tune out the stray capacitances at the selected operating frequency as recited in the claims. In order to gain access to the equivalent circuit at a desired frequency, the parasitic or stray capacitance must be negated or tuned out for that frequency. Too small of an inductance will result in stray capacitance remaining; too large of an inductance will create an inductive barrier to access to the equivalent circuit in place of the capacitive barrier created by the stray capacitance. Moreover, at different frequencies, the inductance required will differ. The inductance must therefore be selected based on the stray capacitance at the desired frequency. *Fütterer* does not mention stray or parasitic capacitance, or tuning such capacitance out at a desired frequency.

Independent claims 1, 8 and 15 also each recite a variable tuning capacitance connected in series with the one or more inputs or outputs of the SAW resonator a resonant frequency of the combination SAW resonator/tuning capacitance circuit. Such a feature is not shown or suggested by the cited reference. Capacitance diodes D1 and D2 depicted in Figure 2 of *Fütterer* are simply switching elements having a "hyper-abrupt characteristic" (i.e., sharp turn-on/turn-off switching),

and are not shown or suggested to have a variable capacitance that may be altered to adapt a resonant frequency of the overall circuit. *Fütterer*, column 4, lines 6–15.

Therefore, the rejection of claims 1–2, 7–9 and 14–20 under 35 U.S.C. § 102 has been overcome.

AMENDMENTS WITH MARKINGS TO SHOW CHANGES MADE

Claim 5 was amended herein as follows:

5. (amended) The two port differential mode SAW resonator circuit as set forth in Claim 4, further comprising:

a first resistor connecting the first differential signal line to a tuning voltage level; and

a second resistor connecting the [first]second differential signal line to the tuning voltage level.

SUMMARY

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ***dvenglarik@davismunck.com***.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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